

WHAT IS CLAIMED IS:

1. A firing mechanism for a semi-automatic pistol having a frame, a slide reciprocally mounted on the frame, a barrel, a firing pin and a trigger, said firing mechanism comprising:

5 a housing mounted within the frame of the pistol;

a pivot arm assembly located within said housing, said pivot arm assembly having a pivot arm frame with laterally spaced side walls, an upper portion, a lower portion and an inner cavity disposed between said pivot arm frame side walls, said lower portion of the pivot arm frame being pivotally attached to said housing such that said pivot arm frame may selectively pivot about a pivot point in a substantially arcuate path between a forward position and a rearward position relative to the front and rear of the pistol, the pivot arm assembly also having a sear pivotally attached to the upper portion of said pivot arm frame, said sear selectively pivoting about a pivot point in a substantially arcuate path between a first position and a second position, and a spring mechanism operatively connected to said sear exerting a biasing force on the sear urging the sear toward said first position.

15 2. The firing mechanism of claim 1 wherein said sear has adjacent first and second surfaces and a control edge that abuttingly engages the leg of the firing pin.

3. The firing mechanism of claim 2 wherein said first surface is at a first angle relative to a longitudinal axis of the sear and said second surface is at a second angle relative to a longitudinal axis of the sear, said first angle being greater than said second angle.

4. The firing mechanism of claim 1 further comprising an actuation rod located in the inner cavity of the pivot arm frame, said actuation rod contacting a bottom surface of the sear.

5. The firing mechanism of claim 4 wherein said spring mechanism includes a spring having a loop portion and two legs, one leg engages the housing and urges the pivot arm frame toward its forward position and opposes the direction of the trigger pull, the other leg biases the actuation rod against the sear urging the sear toward its first position.
6. The firing mechanism of claim 1 wherein said housing includes a stop disposed between the side walls to limit the arcuate pivoting movement of the pivot arm frame.
7. The firing mechanism of claim 1 wherein said pivot arm frame includes a stop to limit the arcuate pivoting movement of the sear.

8. A firing mechanism for a semi-automatic pistol having a frame, a slide reciprocally mounted on the frame, a barrel, a firing pin and a trigger, said firing mechanism comprising:

a housing mounted within the frame of the pistol;

5 a pivot arm assembly located within said housing which may be removed from said housing, said assembly including a pivot arm frame having laterally spaced side walls, an upper portion, a lower portion and an inner cavity disposed between said side walls, said lower portion of the pivot arm frame being pivotally attached to said housing such that said pivot arm frame may 10 selectively pivot in a substantially arcuate path between a forward position and a rearward position relative to the front and rear of the pistol, the pivot arm assembly also includes a sear attached to the upper portion of said pivot arm frame, said sear having adjacent first and second surfaces and a control edge that abuttingly engages the leg of the firing pin, said first surface is at a first 15 angle relative to a longitudinal axis of the sear and said second surface is at a second angle relative to the longitudinal axis of the sear, said first angle being greater than said second angle, and the assembly further includes a spring mechanism operatively connected to said sear exerting a biasing force on the sear.

9. The firing mechanism of claim 8 wherein said sear is pivotally attached to the upper portion of said pivot arm frame, said sear selectively pivoting about a pivot point in a substantially arcuate path between a first position and a second position.

10. The firing mechanism of claim 8 further comprising an actuation rod located in the inner cavity of the pivot arm frame, said actuation rod contacting a bottom surface of the sear.

11. The firing mechanism of claim 10 wherein said spring mechanism includes a spring having a loop portion and two legs, one leg engages the housing and urges the pivot arm frame toward its forward position and opposes the direction of the trigger pull, the other leg biases the actuation rod 5 against the sear urging the sear toward its first position.
12. The firing mechanism of claim 8 wherein said housing includes a stop disposed between the side walls to limit the arcuate pivoting movement of the pivot arm frame.
13. The firing mechanism of claim 8 wherein said pivot arm frame includes a stop to limit the arcuate pivoting movement of the sear.

14. A semi-automatic pistol comprising:

- a frame;
- a barrel mounted on the frame;
- a slide reciprocally mounted on the frame;
- 5 a trigger;
- a firing pin; and

a firing mechanism, said firing mechanism comprising a stationary housing mounted within the frame of the pistol, a pivot arm assembly located within said housing, the pivot arm assembly having a pivot arm frame with laterally spaced side walls, an upper portion, a lower portion and an inner cavity

- 10 disposed between said side walls, said lower portion of the pivot arm frame being pivotally attached to said housing such that said pivot arm frame may selectively pivot about a pivot point in a substantially arcuate path between a forward position and a rearward position relative to the front and rear of the
- 15 pistol, a sear pivotally attached to the upper portion of said pivot arm frame, said sear selectively pivoting about a pivot point in a substantially arcuate path between a first position and a second position, and a spring mechanism operatively connected to said sear exerting a biasing force on the sear holding the sear in said first position.

15. The semi-automatic pistol of claim 14 wherein said sear has adjacent first and second surfaces and a control edge that abuttingly engages the leg of the firing pin, said first surface is at a first angle relative to a longitudinal axis of the sear and said second surface is at a second angle relative to the longitudinal axis

- 5 of the sear, said first angle being greater than said second angle.

16. The semi-automatic pistol of claim 14 further comprising an actuation rod located within the pivot arm frame, said actuation rod contacting a bottom surface of the sear.

17. The semi-automatic pistol of claim 16 wherein said spring mechanism includes a spring having a loop portion and two legs, one leg engages the housing and urges the pivot arm frame toward its forward position and opposes the direction of the trigger pull, the other leg biases the actuation rod 5 against the sear urging the sear toward its first position.

18. A semi-automatic pistol comprising:
a frame;
a barrel mounted on the frame;
a slide reciprocally mounted on the frame;
5 a trigger;
a firing pin; and
a firing mechanism, said firing mechanism comprising a housing mounted within the frame of the pistol, a pivot arm assembly located within said housing, the pivot arm assembly having a pivot arm frame with laterally spaced side walls, an upper portion, a lower portion and an inner cavity disposed between said side walls, said lower portion of the pivot arm frame being pivotally attached to said housing such that said pivot arm frame may selectively pivot about a pivot point in a substantially arcuate path between a forward position and a rearward position relative to the front and rear of the 10 pistol, a sear attached to the upper portion of said pivot arm frame, said sear having adjacent first and second surfaces and a control edge that abuttingly engages the leg of the firing pin, said first surface is at a first angle relative to a longitudinal axis of the sear and said second surface is at a second angle relative to the longitudinal axis of the sear, said first angle being greater than said second 15 angle, and a spring mechanism operatively connected to said sear exerting a biasing force on the sear.
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19. The semi-automatic pistol of claim 18 wherein said sear is pivotally attached to the upper portion of said pivot arm frame, said sear selectively pivoting about a pivot point in a substantially arcuate path between a first position and a second position.
20. The semi-automatic pistol of claim 18 further comprising an actuation rod located within the pivot arm frame, said actuation rod contacting a bottom surface of the sear and the spring, said spring having a loop portion and two legs, one leg engaging the housing and urging the pivot arm frame toward its forward position and opposing the direction of the trigger pull, the other leg biasing the actuation rod against the sear urging the sear toward its first position.